

direction and at least a portion of the chemical compound is adsorbed on the adsorbent; and a second mode in which the fluid flows in a second direction different from the first direction in which the adsorbed chemical compound is exposed to radiation from the radiation resulting in photooxidation of the chemical compound.

5. (Once Amended) The fluid treatment device defined in any one of claims 1-4, wherein the adsorbent comprises a zeolite.

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-39 are pending in the application. Claims 1 and 16 are independent.

Applicants gratefully acknowledge that Claims 16-29 are allowed.

Claim 5 has been amended to overcome the objection under 37 C.F.R. §1.75(c).

Claims 1-4 and 6-15 were rejected under 35 U.S.C. as being unpatentable over Cairns, for the reasons as noted at pages 2-4 of the Office Action. Applicants respectfully traverse all

art rejections.

Independent Claim 1 recites a novel combination of structure and/or function whereby a first valve and a second valve operate such that the fluid treatment zone is reversibly operable between a first mode and a second mode. In the first mode, the fluid flows in a first direction and at least a portion of the chemical compound is adsorbed on the adsorbent. In the second mode, the adsorbed chemical compound is exposed to radiation from the radiation resulting in photooxidation of the chemical compound.

In contrast, none of the cited art, including Cairns, discloses or suggests a combination of elements including the above-discussed features. Accordingly, the salient claimed features of the present invention are fully patentable over the cited art.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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Marked-up Claims

1. (Once Amended) A fluid treatment device for reducing the level of a chemical compound in a fluid comprising:

- a fluid inlet;
- a fluid outlet;
- a flow-through fluid treatment zone disposed between the fluid inlet and the fluid outlet, the fluid treatment zone [having] comprising: a radiation source, an adsorbent and a photocatalyst;

a first valve proximal to the fluid inlet and a second valve proximal to the fluid outlet;

the first valve and the second valve cooperatively operable such that the fluid treatment zone is reversibly operable between a first mode in which the fluid flows in a first direction and at least a portion of the chemical compound is adsorbed on the adsorbent; and a second mode in which the fluid flows in a second direction different from the first direction in which the adsorbed chemical compound is exposed to radiation from the radiation resulting in photooxidation of the chemical compound.

5. (Once Amended) The fluid treatment device defined in [claim] any one of claims 1-4, wherein the adsorbent

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comprises a zeolite.